



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,442	08/26/2003	Go Shirouzu	Q77148	1641
23373 7590 08/21/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER KIM, JUNG W	
			ART UNIT 2132	PAPER NUMBER
			MAIL DATE 08/21/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/647,442

Applicant(s)

SHIROUZU, GO

Examiner

Jung Kim

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 June 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This Office action is responsive to the amendment filed on 6/1/07.
2. Claims 1-25 are pending.

#### ***Response to Arguments***

3. Applicant's arguments with respect to amended claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Objections***

4. Claim 25 is objected to because of the following informalities: Change "An encryption data recording system of claim 26" to --An encryption data recording system of claim 24--. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

Art Unit: 2132

had possession of the claimed invention. Claims 1-26 define a recording media comprises a non-contact Integrated Circuit chip. The specification does not disclose a non-contact Integrated Circuit chip.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claims 1-4 recites the limitation "said data recording system" in independent claims 1 and 3. There is insufficient antecedent basis for this limitation in the claim. Claims 2 and 4 are dependent to claims 1 and 3 and are rejected for the same reasons.

***Claim Rejections - 35 USC § 103***

10. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaquette US Patent Application Publication No. 20030074319 (hereinafter Jaquette) in view of Nakanishi et al. USPN 7,080,259 (hereinafter Nakanishi).

11. As per claim 1, Jaquette discloses an encryption data recording method comprising:

- a. writing encryption data in at least one of recording media, using a data recording system comprising a plurality of the recording media and a plurality of

magazines configured to house the recording media, wherein the data recording system is a library and each of the recording media comprises a cartridge memory and a tape (paragraph 65);

b. a key data storing step storing a key in each of a plurality of the recording media (paragraph 72, 73 and 76), wherein:

c. each of the recording media comprises an Integrated Circuit chip configured to record a key, and a cartridge configured to record the encryption data (paragraphs 65, 73 and 75).

12. Jaquette does not disclose dividing key data of the encryption data into a plurality of key data elements; and wherein the key data element storing step separately storing divided each key data element in a plurality of the recording media. Nakanishi discloses an encryption data recording method (fig. 13 and col. 20:18-54) comprising the steps of: writing encryption data in at least one of recording media, using a data recording system comprising a plurality of the recording media (fig. 13, reference nos. 110 and 122); dividing key data of said encryption data into a plurality of key data elements (fig. 13, reference no. 134); and a key data element storing step separately storing divided each key data element in a plurality of the recording media. (fig. 13, reference nos. 113 and 123; col. 21:4-21) It would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Jaquette to divide key data of the encryption data into a plurality of key data elements; and wherein the key data element storing step separately storing divided each key data element in a plurality of the recording media. One would be motivated to do so to prevent illegal recovery of the

encryption information by distributing the divided key to the plurality of recording media.

Nakanishi, col. 4:23-34.

13. Finally, although Jaquette does not disclose the IC chip as a non-contact IC chip, such a modification is an obvious enhancement as the recording media of Jaquette's invention are removable. A non-contact interface between the IC chip and a reader confers obvious benefits to such a mobile arrangement as known to one of ordinary skill in the art, including a transmission interface that does not deteriorate from repeated connections; and design simplification as known to one of ordinary skill in the art. Official Notice of this teaching is taken. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Jaquette such that the IC chip is a non-contact IC chip. One would be motivated to do so to confer the benefits of non-contact IC chip in a removable recording media as known to one of ordinary skill in the art. The aforementioned cover the limitations of claim 1.

14. As per claim 2, the rejection of claim 1 under 35 USC 103(a) as being unpatentable over Jaquette in view of Nakanishi is incorporated herein. In addition, Nakanishi further discloses an encryption data reproducing method which reproduces encryption data recorded with an encryption data recording method according to claim 1, the reproducing method (fig. 13 and col. 20:55-21:35) comprising the steps of: a data reading step reading encryption data written in at least one of plurality of recording media (fig. 13, reference nos. 110, 122 and 133; col. 12:55-58); a key data element

Art Unit: 2132

reading step reading all said key data elements from said recording media in which a plurality of key data elements obtained by dividing key data of said encryption data are separately stored (fig. 13, reference nos. 110, 122; col. 12:55-58); and a decrypting step producing said key data based on said key data elements and decrypting said encryption data using the key data. (fig. 13, reference nos. 105, 135; col. 20:58-21:3)

The aforementioned cover the limitations of claim 2.

15. As per claim 3, Jaquette discloses an encryption data recording method comprising the steps of:

- d. a data writing step writing encryption data in part of recording media, using a data recording system comprising a plurality of the recording media and a plurality of magazines configured to house the recording media, wherein the data recording system is a library and each of the recording media comprises a cartridge memory and a tape (paragraph 65); and
- e. a key data storing step storing key data of the encryption data in the recording media (paragraph 72, 73 and 76), wherein
- f. each of the recording media comprises an Integrated Circuit chip configured to record a key data element, and a cartridge configured to record the encryption data. (paragraphs 65, 73 and 75)

16. Jaquette does not disclose the key data storing step storing key data of the encryption data in any one of other recording media. Nakanishi discloses an encryption data recording method (fig. 13 and col. 20:18-54) comprising the steps of: writing

encryption data in at least one of recording media, using a data recording system comprising a plurality of the recording media (fig. 13, reference nos. 110 and 122); dividing key data of said encryption data into a plurality of key data elements (fig. 13, reference no. 134); and a key data element storing step separately storing divided each key data element in a plurality of the recording media, wherein the encryption data is divided and the divided encryption data are stored separately in the corresponding plurality of the recording media. (fig. 13, reference nos. 113 and 123; col. 21:4-21) It would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Jaquette so that the key data storing step stored key data of the encryption data in any one of other recording media. One would be motivated to do so to prevent illegal recovery of the encryption information by distributing the divided key to the plurality of recording media. Nakanishi, col. 4:23-34.

17. Finally, although Jaquette does not disclose the IC chip as a non-contact IC chip, such a modification is an obvious enhancement as the recording media of Jaquette's invention are removable. A non-contact interface between the IC chip and a reader confers obvious benefits to such a mobile arrangement as known to one of ordinary skill in the art, including a transmission interface that does not deteriorate from repeated connections; and design simplification as known to one of ordinary skill in the art. Official Notice of this teaching is taken. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Jaquette such that the IC chip is a non-contact IC chip. One would be motivated to do so to confer the benefits of non-contact IC chip in a removable recording media as



known to one of ordinary skill in the art. The aforementioned cover the limitations of claim 3.

18. As per claim 4, the rejection of claim 3 under 35 USC 103(a) as being unpatentable over Jaquette in view of Nakanishi is incorporated herein. In addition, Nakanishi further discloses an encryption data reproducing method which reproduces encryption data recorded with an encryption data recording method according to claim 2, the reproducing method comprising the steps of: a data reading step reading encryption data written in at least one of plurality of recording media; and a decrypting step reading said key data from any one of other recording media in which key data of said encryption data is stored and decrypting said encryption data, using the key data. (20:49-21:3) The aforementioned cover the limitations of claim 4.

19. As per claim 5, Jaquette discloses an encryption data recording system comprising:

- g. a plurality of recording media and a drive configured to write encryption data in the recording media; (paragraph 65, 74 and 75)
- h. a key data storing element unit which is provided with each recording medium of the plurality of recording media and stores a key in each of a plurality of the recording media (paragraph 72, 73 and 76),

Art Unit: 2132

- i. a control mechanism comprising the steps of producing the encryption data and writing the encryption data in at least one of the plurality of the recording media by the drive; (paragraph 75)
- j. wherein the data recording system is a library and each of the recording media comprises a cartridge memory and a tape (paragraph 65); wherein:
- k. each of the recording media comprises an Integrated Circuit chip configured to record a key, and a cartridge configured to record the encryption data (paragraphs 65, 73 and 75).

20. Jaquette does not disclose the key data element storing unit stores key data elements into which key data of the encryption data is divided; and the control mechanism producing a plurality of the key data elements by dividing key data of the encryption data, and separately storing divided each key data element in each key data element storing unit. Nakanishi discloses an encryption data recording method (fig. 13 and col. 20:18-54) comprising the steps of: writing encryption data in at least one of recording media, using a data recording system comprising a plurality of the recording media (fig. 13, reference nos. 110 and 122); dividing key data of said encryption data into a plurality of key data elements (fig. 13, reference no. 134); and a key data element storing step separately storing divided each key data element in a plurality of the recording media. (fig. 13, reference nos. 113 and 123; col. 21:4-21) It would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Jaquette such that the key data element storing unit stores key data elements into which key data of the encryption data is divided; and the control

Art Unit: 2132

mechanism producing a plurality of the key data elements by dividing key data of the encryption data, and separately storing divided each key data element in each key data element storing unit. One would be motivated to do so to prevent illegal recovery of the encryption information by distributing the divided key to the plurality of recording media.

Nakanishi, col. 4:23-34.

21. Finally, although Jaquette does not disclose the IC chip as a non-contact IC chip, such a modification is an obvious enhancement as the recording media of Jaquette's invention are removable. A non-contact interface between the IC chip and a reader confers obvious benefits to such a mobile arrangement as known to one of ordinary skill in the art, including a transmission interface that does not deteriorate from repeated connections; and design simplification as known to one of ordinary skill in the art. Official Notice of this teaching is taken. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Jaquette such that the IC chip is a non-contact IC chip. One would be motivated to do so to confer the benefits of non-contact IC chip in a removable recording media as known to one of ordinary skill in the art. The aforementioned cover the limitations of claim 5.

22. As per claim 6, the rejection of claim 5 under 35 USC 103(a) as being unpatentable over Jaquette in view of Nakanishi is incorporated herein. Nakanishi further discloses an encryption data reproducing system which reproduces encryption data recorded with an encryption data recording method according to claim 5, the

Art Unit: 2132

reproducing system (Nakanishi, fig. 13 and col. 20:55-21:35) comprising: a plurality of recording media and a drive configured to read encryption data in the plurality of recording media; (Nakanishi, fig. 13, reference nos. 110, 122 and 133; col. 12:55-58); a key data element storing unit which is provided with each recording medium of the plurality recording media and stores key data elements into which key data of the encryption data is divided (Nakanishi, fig. 13, reference nos. 110, 122; col. 12:55-58); and a control mechanism comprising the steps of reading the encryption data written in the recording medium by the drive and reading all the key data elements separately stored in the each key data element storing unit, and producing the key data based on the read each key data element and decrypting the encryption data using the key data. (Nakanishi, fig. 13, reference nos. 105, 135; col. 20:58-21:3) The aforementioned cover the limitations of claim 6.

23. As per claim 7, Jaquette discloses an encryption data recording system comprising:

- l. a plurality of recording media and a drive configured to write encryption data in the recording media; (paragraph 65, 74 and 75)
- m. a key data element storing unit which is provided with each of the recording medium of the plurality of the recording media and stores key data of the encryption data; and (paragraph 72, 73 and 76)
- n. a control mechanism comprising the steps of producing the encryption data and writing the encryption data in part of plurality of the recording media by

the drive, and storing the key data in the key data storing unit of a recording media; (paragraph 75)

o. wherein the data recording system is a library and each of the recording media comprises a cartridge memory and a tape (paragraph 65); and

p. each of the recording media comprises an Integrated Circuit chip configured to record a key data element, and a cartridge configured to record the encryption data. (paragraphs 65, 73 and 75)

24. Jaquette does not disclose the control mechanism storing key data of the encryption data in any one of other recording media. Nakanishi discloses an encryption data recording method (fig. 13 and col. 20:18-54) comprising the steps of: writing encryption data in at least one of recording media, using a data recording system comprising a plurality of the recording media (fig. 13, reference nos. 110 and 122); dividing key data of said encryption data into a plurality of key data elements (fig. 13, reference no. 134); and a key data element storing step separately storing divided each key data element in a plurality of the recording media, wherein the encryption data is divided and the divided encryption data are stored separately in the corresponding plurality of the recording media. (fig. 13, reference nos. 113 and 123; col. 21:4-21) It would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Jaquette so that the control mechanism stores key data of the encryption data in any one of other recording media. One would be motivated to do so to prevent illegal recovery of the encryption information by distributing the divided key to the plurality of recording media. Nakanishi, col. 4:23-34.

Art Unit: 2132

25. Finally, although Jaquette does not disclose the IC chip as a non-contact IC chip, such a modification is an obvious enhancement as the recording media of Jaquette's invention are removable. A non-contact interface between the IC chip and a reader confers obvious benefits to such a mobile arrangement as known to one of ordinary skill in the art, including a transmission interface that does not deteriorate from repeated connections; and design simplification as known to one of ordinary skill in the art. Official Notice of this teaching is taken. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Jaquette such that the IC chip is a non-contact IC chip. One would be motivated to do so to confer the benefits of non-contact IC chip in a removable recording media as known to one of ordinary skill in the art. The aforementioned cover the limitations of claim 7.

26. As per claim 8, the rejection of claim 7 under 35 USC 103(a) as being unpatentable over Jaquette in view of Nakanishi is incorporated herein. In addition, Nakanishi further discloses an encryption data reproducing system which reproduces encryption data recorded by an encryption data recording system according to claim 7, which the reproducing system reproduces the encryption data recorded in part of plurality of recording media using key data stored in any one of other recording media, the reproducing system comprising: a drive which reads from said recording medium, and a key data element storing unit which is provided with said recording medium and stores the key data of said encryption data; and a control mechanism comprising the

Art Unit: 2132

steps of reading said encryption data written in said recording medium by said drive and reading the key data stored in said key data element storing unit, and decrypting said encryption data using the key data. (fig. 13 and col. 20:55-21:35) The aforementioned cover the limitations of claim 8.

27. As per claims 9-12, the rejections of claims 5-8 as being unpatentable over Jaquette in view of Nakanishi are incorporated herein. Although Jaquette does not expressly disclose that the recording medium is a magnetic tape, it is notoriously well known in the art that magnetic tape is one of the primary storage mediums for computer data. It is further notoriously well known to use magnetic tape over other types of storage mediums because of its low cost. Examiner takes Official notice of this teaching. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Jaquette such that the storage medium is magnetic tape. One would be motivated to do so because of the low cost of magnetic tape compared with other storage mediums as known to one of ordinary skill in the art. The aforementioned cover the limitations of claims 9-12.

28. As per claims 13-16, the rejections of claims 5-8 as being unpatentable over Jaquette in view of Nakanishi are incorporated herein. In addition, Jaquette further discloses said recording medium is a magnetic disk. (paragraph 64)

Art Unit: 2132

29. As per claims 17-20, the rejections of claims 5-8 as being unpatentable over Jaquette in view of Nakanishi are incorporated herein. In addition, Jaquette further discloses said recording medium is an optical recording disk. (paragraph 64)

30. As per claims 21 and 22, the rejections of claims 1 and 5 under 35 USC 103(a) as being unpatentable over Jaquette in view of Nakanishi are incorporated herein. In addition, Nakanishi discloses a device that stores cartridge specific data in at least one of the plurality of recording media, to specify recording media storing the plurality of key data elements. Nakanishi, col. 20:46-59.

31. As per claim 23, the rejection of claim 5 under 35 USC 103(a) as being unpatentable over Jaquette in view of Nakanishi are incorporated herein. In addition, the number of key data elements is equal to the number of recording mediums in the plurality of recording media. Nakanishi, col. 21:4-21.

32. As per claims 24 and 25, the rejection of claim 7 under 35 USC 103(a) as being unpatentable over Jaquette in view of Nakanishi are incorporated herein. In addition, the key data is stored in a single recording medium in the plurality of recording media, other than the plurality of recording media storing the encryption data; wherein the key data is undivided. Nakanishi, col. 20:41.



Art Unit: 2132

33. As per claim 26, the rejection of claim 1 under 35 USC 103(a) as being unpatentable over Jaquette in view of Nakanishi are incorporated herein. In addition, the method further comprising storing more than one key data element in at least one of the recording media. Nakanishi, col. 21:7-11.

### ***Conclusion***

34. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Communications Inquiry***

Art Unit: 2132

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung W. Kim whose telephone number is 571-272-3804. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jung W Kim  
Examiner  
Art Unit 2132



GILBERTO BARRON *ja*  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100